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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,410	06/19/2001	Mustansir Faizullabhoy	00AN061	3164

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EXAMINER
JONES, JUDSON

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 07/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/884,410	FAIZULLABHOY ET AL.	
	Examiner	Art Unit	
	Judson H Jones	2834	

-- The MAILING DATE of this communication appears on th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowability of claims 6-8 and 12-33 is withdrawn in view of the newly discovered reference(s) to Barthel et al. 5,590,278 A. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

In examining claims 1-11 and 13-33 the word module is interpreted to mean any of a series of standardized units.

Claims 1-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hommes et al. 4,675,582 A in view of Barthel et al. 5,590,278 A. Hommes et al. discloses a path module for a linear motor comprising at least one armature winding 138, 142, 146, 150, an amplifier 136, 140, 144, 148 connected to the winding, and a module controller 128, 130, 132, 134 coupled to the amplifier as shown in figure 1 but does not disclose separate addresses for each module. Hommes et al. shows a data communications bus 102 with communication channels running between bus 102 and each controller 128, 130, 132 134 but says very little about how the computer control system works. Hommes discloses his control system as being usable for a plurality of carriages propelled independently by a system of synchronous linear motors and shows the linear motor path in figure 2. Barthel et al. teaches a system for controlling modules for an electrical unit and teaches using module specific addresses for a computer in

column 2 lines 49-56. Since Barthel et al. and Hommes et al. are from the same field of endeavor and also because Hommes et al. does not disclose how his modules are addressed, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized specific addresses for each module in the device of Hommes et al.

In regard to claim 5, see Hommes et al. figure 2.

In regard to claim 9, see Barthel et al. column 2 lines 63-67.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable Hommes et al. as modified by Barthel et al. as applied to claim 1 and further in view of Izawa et al. 6,075,297 A. Hommes et al. as modified by Barthel et al. discloses the path module but does not disclose an encoder sensor to provide information indicative of a positional change of a stage relative to a path. Barthel et al. states in column 2 lines 65-67, "During normal operation of the automations system, the module controller 7 accesses the module storage device 10. In some instances, it may also access sensors and/or final controlling elements directly, as indicated by an arrow A in figure 1." There is no arrow labeled A in figure 1 but an arrow is shown below box 2, with the arrow also connected to module controller 7 and module storage device 10. Barthel et al. does not disclose what the sensors are for. Izawa et al. teaches in column 5 lines 54-65 that linear motor sensors including encoders can be used for position detection with the position information then used for operational control of the motor. Since Izawa et al. and Hommes et al. as modified by Barthel et al. are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized an encoder combined with sensors for position detection for the purpose of improving the positional accuracy of the motor.

Claims 10, 11, 13-20 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takei 5,831,352 A in view of Hommes et al. and Barthel et al. Takei discloses in figure 8 a path module for a linear motor comprising a plurality of armature windings with means for controlling each individual winding as described in column 6 lines 34-52 but does not disclose each armature winding having a unique address. Hommes et al. teaches controlling a linear motor having modules (i.e., a series of standardized units). In Takei figure 8 each winding is individually controlled and can be considered a module. Since Hommes et al. and Takei are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a computer control system for the motor in order to improve the positioning and thus the efficiency of the motor. Takei as modified by Hommes et al. does not disclose each armature winding having a unique address. Barthel et al. teaches a system for controlling modules for an electrical unit and teaches using module specific addresses for a computer in column 2 lines 49-56. Since Barthel et al. and Takei as modified by Hommes et al. are from the same field of endeavor and also because Takei as modified by Hommes et al. does not disclose how the modules are addressed, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized specific addresses for each module in the device of Hommes et al. in order to improve control of the motor and thus increase the efficiency of the device.

In regard to claims 11, 13-16, 20 and 26-28, see elements 136, 140, 144 and 148 in figure 1.

In regard to claim 17-19, see Barthel et al. column 2 lines 49-56 and column 4 lines 10-19.

Claims 21, 23-25, 29, 30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takei as modified by Hommes et al. and Barthel et al. as applied to claims 13, 16 and 28 and further in view of Izawa et al. 6,075,297 A. Takei as modified by Hommes et al. and Barthel et al. discloses the path module but does not disclose an encoder sensor to provide information indicative of a positional change of a stage relative to a path. Barthel et al. states in column 2 lines 65-67, "In some instances, it may also access sensors and/or final controlling elements directly, as indicated by an arrow A in figure 1." There is no arrow labeled A in figure 1 but an arrow is shown below box 2, with the arrow also connected to module 7. Barthel et al. does not disclose what the sensors are for. Izawa et al. teaches in column 5 lines 54-65 that linear motor sensors including encoders can be used for position detection that is then used for operational control of the motor. Since Izawa et al. and Takei as modified by Hommes et al. and Barthel et al. are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized an encoder combined with sensors for position detection for the purpose of improving the positional accuracy of the motor.

Claims 22 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takei as modified by Hommes et al., Barthel et al. and Izawa et al. as applied to claims 16 and 29 and further in view of Nakashima 5,729,251 A. Takei as modified by Hommes et al., Barthel et al. and Izawa et al. discloses the linear motor system with the plurality of path modules but does not disclose wireless communication between the moving member and the system controller. Nakashima teaches in column 10 line 62 to column 11 line 2 using a wireless communication device between a coordinate indicator and an information processing device in order to eliminate wires between the indicator and the processing device. Since Nakashima and Takei as modified

by Hommes et al., Barthel et al. and Izawa et al. are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized wireless signaling devices in a linear motor system with a plurality of path modules in order to eliminate wires and possible wire breakage between the indicator and the processing device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ
July 19, 2003

Nicholas Ponomarenko
Primary Examiner
Technology Center 2800